Interagency Review of the Export Licensing Process for Foreign National Visitors

March 2000




Prepared by the
Offices of the Inspectors General
of the
Department of Commerce
Department of Defense
Department of Energy
Department of State

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Acronyms

BXA	Bureau of Export Administration
DTC	Office of Defense Trade Controls
EAR	Export Administration Regulations
ITAR	International Traffic in Arms Regulations
NASA	National Aeronautics and Space Administration
NIST	National Institute of Standards and Technology
NOAA	National Oceanic and Atmospheric Administration
OIG	Office of the Inspector General

March 24, 2000

PREFACE

We are providing this report for information and use. This review was undertaken as a cooperative effort of the Inspectors General of the Departments of Commerce, Defense, Energy, and State in response to specific provisions of the National Defense Authorization Act for Fiscal Year 2000 (Public Law 106-65). Our overall objective was to determine whether the policies and procedures for deemed exports at Federal laboratories and agencies adequately protect against the transfer of technologies and technical information to countries and entities of concern.

This report addresses issues that affect more than one agency and includes separate appendixes that contain the agency-specific reports addressing the issues related to each agency.

Agency comments were not obtained for this interagency report due to time constraints. However, agency comments on agency draft reports were requested and in some cases obtained from the appropriate officials of each agency and were considered in the preparation of this report. Agency comments on individual agency reports are included in those reports. Officials at the Departments of Commerce, Energy, and State generally agreed with most of the findings in their agency reports. Pertinent Department of Defense officials did not provide comments to the Department of Defense draft report. The Department of State report incorporates informal comments.

We hope that this joint report will be useful in shaping the future of the export licensing process for deemed exports.

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Report No. D-2000-109 **March 24, 2000**

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Executive Summary

Introduction. Public Law 106-65, the National Defense Authorization Act for Fiscal Year 2000, section 1402, "Annual Report on Transfer of Militarily Sensitive Technology to Countries and Entities of Concern," October 5, 1999, required the President to submit an annual report to Congress, beginning in the year 2000 and ending in the year 2007, on the transfer of militarily sensitive technology to countries and entities of concern. The National Defense Authorization Act further required that the Inspectors General of the Departments of Commerce, Defense, Energy, and State, in consultation with the Director of the Central Intelligence Agency and the Director of the Federal Bureau of Investigation, conduct an annual review of the policies and procedures of the U.S. Government with respect to their adequacy to prevent the export of sensitive technologies and technical information to countries and entities of concern. To comply with the first-year requirement of the Act, the Offices of the Inspectors General (OIGs) conducted an interagency review of Federal agencies' compliance with the deemed export licensing requirements contained in the Export Administration Regulations and the International Traffic in Arms Regulations.

Background. Foreign nationals visit Federal research facilities for various reasons, as well as under various international agreements and programs. During those visits, foreign nationals may have access to export-controlled software or technology. The release to foreign nationals of technical data that meet the criteria of the Export Administration Regulations or the International Traffic in Arms Regulations is considered an export. According to those regulations, the oral, visual, or written disclosure of technical data to a foreign national may require a "deemed" export license. For the purposes of this report, the term foreign national visitor includes any foreign national assignee, worker, or visitor who is in the United States without permanent resident status.

Objectives. Our overall objective was to determine whether the policies and procedures for the disclosure of oral, visual, or written technical data to a foreign national (deemed exports) at Federal research facilities and agencies adequately protect against the transfer of technologies and technical information to countries and entities of concern. Specifically, we examined whether laboratories and Federal agencies were in compliance with deemed export licensing regulations and whether deemed export licenses were required and obtained, as necessary, for foreign national visitors. In addition, the

Departments of Commerce and State OIGs assessed their agencies' implementation of deemed export regulations as related to Federal agencies and U.S. industry.

Review Results.

Awareness of Deemed Export Licensing Requirements. The Departments of Commerce and Defense OIGs determined that managers responsible for obtaining a deemed export license in conjunction with a foreign visit within their respective agencies were not, for the most part, knowledgeable of deemed exports or of the licensing requirements for deemed exports. The Department of Energy OIG, in its May 1999 report, concluded that improvements were needed in deemed export licensing activities. Energy established a task force that addressed those concerns. Consequently, the Energy OIG concluded during this review that, in general, Energy managers were aware of the licensing requirements for deemed exports, but some improvements were needed in Energy's process for determining whether a deemed export license application was required at an Energy facility. Federal agencies' lack of awareness and understanding of deemed exports could damage national security if militarily sensitive technology is released to inappropriate end users.

Efforts to Raise Awareness. The Departments of Commerce and State have responsibilities for educating Federal agencies and U.S. industry personnel on the requirements pertaining to deemed export licenses in the Export Administration Regulations and the International Traffic in Arms Regulations. The Departments of Commerce and State OIGs found that both agencies could improve their outreach programs to raise awareness of deemed export regulations.

Federal Agencies' Policies and Procedures to Implement Deemed Export Controls. Research facilities of the Departments of Commerce and Defense did not have export control policies and procedures to help ensure that militarily critical technologies and technical information were only released to foreign nationals visiting research facilities in accordance with Federal export licensing requirements. The Department of Energy had policies; however, those policies needed further clarification.

Federal Agency Applications for Deemed Export Licenses. During FY 1999, 783 deemed export license applications were submitted to the Department of Commerce for approval but only 5 applications were from Federal agencies (3 from Energy and 2 from the National Aeronautics and Space Administration). According to Department of State officials, few Federal research facilities and agencies apply for munitions licenses, although it would appear that a number of activities in which those Federal entities are engaged constitute an "export" as defined by the International Traffic in Arms Regulations and therefore subject to regulatory requirements. State was not able to identify any licenses approved for Federal research facilities and agencies. Departments of Commerce, Defense, and Energy OIG reviews found instances in which some Federal agencies may have required a deemed export license but had not applied for one.

Clarification of the Deemed Export Regulations. The Departments of Commerce, Defense, and Energy OIGs found that export control policies and regulations concerning deemed exports were ambiguous. The term "fundamental research" needed

to be better defined so that Federal agencies are not given the opportunity to broadly interpret its meaning to possibly avoid compliance with the intent of the regulations. The Department of Energy OIG reported in its May 1999 report that export control policy and regulations concerning deemed exports were ambiguous. The Department of Energy OIG also reported on the ambiguity in the Export Administration Regulations regarding fundamental research and whether an export license was required for research conducted at a Federally Funded Research and Development Center. Additionally, some of the exemptions listed in the regulations may adversely affect national security and therefore require further examination.

Level of Compliance by U.S. Industry. The Departments of Commerce and State OIGs attempted to determine whether U.S. industry was complying with the deemed export regulations and found that U.S. industry's level of compliance was unknown at best, and probably very low. For example, of the 783 deemed export license applications submitted for Commerce's approval during FY 1999, 778 were from industry. The Department of State tracking system could not identify the universe of foreign nationals listed on export license applications.

Recommendations, Agency Comments, and OIG Responses. The participating OIGs made specific recommendations relevant to their own agencies. Recommendations, agency comments, and OIG responses are included in the separate reports issued by each office, which are in Appendix B (Commerce), Appendix C (Defense), Appendix D (Energy), and Appendix E (State). Because of time constraints, agency managers were not asked to respond to this interagency report. Agency comments discussed in this report are those provided in response to the individual reports of the participating OIGs.

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Introduction

Public Law 106-65, the National Defense Authorization Act for Fiscal Year 2000, section 1402, "Annual Report on Transfer of Militarily Sensitive Technology to Countries and Entities of Concern," October 5, 1999, contained a provision requiring the President to submit an annual report to Congress, beginning in the year 2000 and ending in the year 2007, on the transfer of militarily sensitive technology to countries and entities of concern. The National Defense Authorization Act further required that the Inspectors General of the Departments of Commerce, Defense, Energy, and State, in consultation with the Director of the Central Intelligence Agency and the Director of the Federal Bureau of Investigation, conduct an annual review of the policies and procedures of the U.S. Government with respect to their adequacy to prevent the export of sensitive technologies and technical information to countries and entities of concern. To comply with the first-year requirement of the Act, the Offices of the Inspectors General (OIGs) conducted an interagency review of Federal agencies' compliance with the deemed export licensing requirements contained in the Export Administration Regulations (EAR) and the International Traffic in Arms Regulations (ITAR).

Background

In August 1998, the Chairman of the Senate Committee on Governmental Affairs requested that the Inspectors General from the Departments of Commerce, Defense, Energy, State, and the Treasury and the Central Intelligence Agency conduct an interagency review of the export licensing processes for dual-use commodities and munitions. The objective of the review was to determine whether current practices and procedures were consistent with national security and foreign policy objectives. An interagency OIG report, "Interagency Review of the Export Licensing Processes for Dual-Use Commodities and Munitions," was issued in June 1999.

According to the June 1999 interagency report, Federal research facilities,[1] including those at Commerce, Defense, and Energy, were not applying for export licenses for foreign nationals who might have access to export-controlled technology or software, or both, while visiting or working at the research facilities. Also, the general provisions in the EAR regarding deemed exports were not well defined and the export control policy concerning deemed exports was ambiguous.

Foreign nationals may have access to export-controlled software or technology when visiting Federal research facilities. To export means to send or take commodities (material and equipment), computer software, or technical data from the United States to a foreign destination or to transfer technical data, including

[1] For the purposes of this report, the term research facility is used to connote any Federal research center, laboratory, or entity in which research and development activities occur.

computer software, by any means to a foreign destination or to a foreign national in the United States. The release of technical data that meet Department of Commerce (Commerce) criteria in the EAR,[2] or Department of State (State) criteria in the ITAR,[3] to a foreign national working in or visiting a Federal research facility in the United States is considered an export to the home country of the foreign national. For the purposes of this report, the term foreign national visitor includes any foreign national assignee, worker, or visitor who is in the United States without permanent resident status.

EAR Requirements. Commerce's Bureau of Export Administration (BXA) controls the export of dual-use commodities[4] using the authority provided in the Export Administration Act of 1979, as amended. The Export Administration Act last expired in August 1994 and has not been reenacted. However, pursuant to Executive Order 12924, "Continuation of Export Control Regulations," August 19, 1994, the President declared a national emergency and, under the authority of the International Emergency Economic Powers Act,[5] continued and amended the provisions of the Export Administration Act. Each year thereafter, and most recently on August 11, 1999, the President issued a notice, "Continuation of Emergency Regarding Export Control Regulations," thereby continuing the authority for imposing export controls.

The EAR implements the Export Administration Act and Executive Order 12924 requirements for executing the export licensing process for dual-use commodities. In addition, the EAR contains the Commerce Control List that identifies all dual-use commodities, technologies, or software subject to the export licensing process as well as the conditions under which they may be exported. According to the EAR, any release to a foreign national of software or technology that is subject to the EAR is "deemed to be an export" to the home country of the foreign national. Those exports are commonly referred to as "deemed exports." Software or technology can be exported through:

- visual inspection by foreign nationals of U.S.-origin equipment and facilities;
- oral exchanges of information in the United States or abroad; or
- the application to situations abroad of personal knowledge or technical experience acquired in the United States.

Of the 12,650 export license applications BXA received during FY 1999, 783 (6 percent) were for deemed exports. Of those, 679 were approved, 63 were returned without action, 41 were still pending as of November 1999,

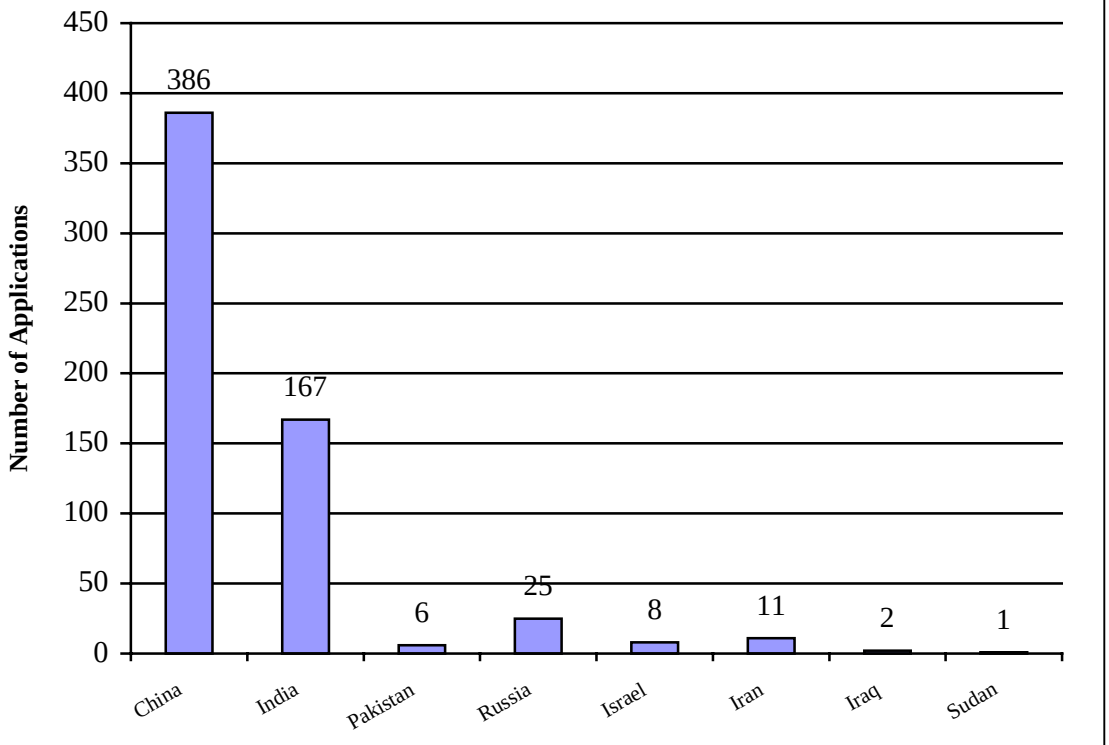
[2] 15, Code of Federal Regulations, part 730.

[3] 22, Code of Federal Regulations, part 120.

[4] Dual-use commodities are goods and technologies determined to have civilian and military application.

[5] Title 50, United States Code, section 1701, et seq.

and none were denied. In addition, as illustrated in the following figure, 606 (78 percent) of the 783 deemed export license applications received in FY 1999 were for foreign nationals from countries of concern.



Deemed Export Applications Received in FY 1999 for Foreign Nationals From Countries of Concern

ITAR Requirements. State's Office of Defense Trade Controls (DTC) is responsible for registering persons or industries involved in controlling the export of defense-related articles and services, approving or denying export licenses, and ensuring compliance with the Arms Export Control Act[6] and other applicable laws and regulations. The ITAR implements the Arms Export Control Act and contains the U.S. Munitions List, which identifies defense articles, services, and related technical data that may be exported as well as the conditions under which munitions may be exported. That list includes those items, technologies, and services that are inherently military in character and could, if exported, jeopardize national security or foreign policy interests of the United States.

The ITAR states that, unless otherwise exempted, a license is required for the oral, visual, or written disclosure of technical data to a foreign national in

[6] Title 22, United States Code, section 2751.

connection with visits by U.S. citizens to foreign countries and visits by foreign nationals to the United States. An export license is required regardless of the manner in which the technical data is transmitted. Although the ITAR does not use the term "deemed exports," for the purposes of this report, the term deemed exports pertains to the oral, visual, or written disclosure of technical data to a foreign national. During FY 1999, DTC received 45,059 export license applications for munitions. We were unable to determine how many of those applications were for deemed exports because the DTC tracking system could not identify the universe of foreign nationals listed on export license applications.

It is important to note that the deemed export licensing requirement is not limited to the release of technology to foreign national employees of U.S. industry, but also applies to any foreign national who is given access to controlled technology, such as an individual who is visiting or on assignment at a Federal research facility. It is the responsibility of the U.S. entity that is hosting or employing the foreign national to submit a deemed export license application to BXA or DTC for review.

Objectives

Our overall objective was to determine whether the policies and procedures for the disclosure of oral, visual, or written technical data to a foreign national (deemed exports) at Federal research facilities and agencies adequately protect against the transfer of technologies and technical information to countries and entities of concern. Specifically, we examined whether laboratories and Federal agencies were in compliance with deemed export licensing regulations and whether deemed export licenses were required and obtained, as necessary, for foreign national visitors. In addition, Commerce and State OIGs assessed BXA and DTC implementation of deemed export regulations as related to Federal agencies and U.S. industry. See Appendix A for a discussion of scope and methodology of the reviews.

A. Awareness of Deemed Export Licensing Requirements

Commerce and Department of Defense (Defense) OIGs determined that managers responsible for obtaining a deemed export license in conjunction with a foreign visit within their respective agencies were not, for the most part, knowledgeable of deemed exports or of the licensing requirements for deemed exports. The Department of Energy (Energy) OIG, in its May 1999 report, concluded that improvements were needed in deemed export licensing activities. Energy established a task force that addressed those concerns. Consequently, the Energy OIG concluded during this review that, in general, Energy managers were aware of the licensing requirements for deemed exports, but some improvements were needed in Energy's process for determining whether a deemed export license application was required at an Energy facility. Federal agencies' lack of awareness and understanding of deemed exports could damage national security if militarily sensitive technology is released to inappropriate end users.

Awareness at Commerce. The Commerce OIG conducted a limited review of Commerce's two scientific bureaus, the National Institute of Standards and Technology (NIST) and the National Oceanic and Atmospheric Administration (NOAA), and determined that most senior officials in both bureaus were not familiar with deemed export regulations. The Commerce OIG recommended that BXA officials meet with NIST and NOAA officials to discuss deemed export regulations and their potential relevance to those bureaus. The Commerce OIG also looked at whether BXA had received applications for deemed export licenses from other Federal agencies that would most likely have militarily sensitive technology and foreign visitors and workers. Energy and the National Aeronautics and Space Administration (NASA) were the only two Federal agencies that had applied for deemed export licenses from BXA in FY 1999.

NIST and NOAA generally concurred with the Commerce OIG recommendations, although NIST officials stated that it is an organization that predominately conducts fundamental research and is therefore exempt from deemed export controls. In its response, BXA indicated that it had made a concerted effort to explain the deemed export rule and its ramifications to not just U.S. industry but also to many U.S. Government research facilities. BXA stated that it had a long-standing policy of including licensing and enforcement officials from other agencies as both guests and instructors in its seminar programs; however, the Commerce OIG believes that to better ensure awareness of deemed export controls, BXA should also provide outreach to the appropriate program and management officials at Federal agencies, including Commerce, who are responsible for ensuring that their agencies are compliant with export control laws.

Awareness at Defense. The Defense OIG found that Military Department program officials at different levels who had management and oversight responsibilities for approving or denying foreign national visits to Defense research facilities were unaware of the term or licensing requirements for deemed exports. Except for Foreign Military Sales officials, personnel were not knowledgeable of the EAR or the ITAR export licensing requirement for release of technical data. Officials were familiar with the policies and procedures governing identification of militarily critical technologies and disclosure of classified military information and controlled unclassified information; however, they did not relate those policies and procedures to the need for a deemed export license. The Defense OIG recommended that senior Defense officials coordinate with Commerce and State to develop guidance for determining and applying deemed export licensing requirements to Defense organizations.

Awareness at Energy. The Energy OIG found that Energy management had made improvements in Energy's process for determining whether an export license application might be required for a foreign national visit or assignment to an Energy site.[7] For example, training was implemented for hosts of foreign nationals regarding deemed export issues and associated host responsibilities. Awareness was heightened among Energy and Energy contractor employees regarding export controls and requirements regarding the deemed export licensing process; requests for visits and assignments of foreign nationals were subjected to reviews for security, counterintelligence, intelligence, and export control concerns for the release of technical data. Despite those positive steps, however, some improvement is required (see Appendix D).

[7] Energy reported in its May 1999 report, "The Department of Energy's Export Licensing Process for Dual-Use and Munitions Commodities," that improvements were needed in Energy's process for determining whether an export license was required in conjunction with assignments of foreign nationals to Energy laboratories.

B. Efforts to Raise Awareness

Commerce and State have responsibilities for educating Federal agencies and U.S. industry personnel on the EAR and ITAR requirements for deemed export licenses. Commerce and State OIGs found that both agencies could improve their outreach programs to raise awareness of deemed export regulations.

Commerce's Outreach Program. The Commerce OIG found that the outreach program could be improved. BXA conducts educational outreach visits to industry and Federal agencies to inform them of the export licensing requirements of the EAR. During those visits, some information is provided about the deemed export regulations and what needs to be done to ensure compliance. BXA also conducts training for interested parties and has some limited information on its web site regarding how to apply for a deemed export license. However, the Commerce OIG believed that BXA needed to be more proactive in "getting the word out" to high-technology industry, industry associations, and Federal agencies it felt might need to apply for a deemed export license. The Commerce OIG recommended in its June 1999 report that BXA "develop and implement an outreach program to explain and seek compliance with the requirements for export licenses for deemed exports." In response to the recommendation, BXA management stated that it did not have sufficient resources to conduct outreach visits to all of the entities that may be noncompliant.[8]

The Commerce OIG continues to believe that BXA needs to target its outreach to those Federal agencies and industries that are likely to have technology subject to deemed export controls. In addition, the Commerce OIG stated that there were other tools BXA could use to help educate its audiences about deemed export regulations. For example, BXA could include more information on deemed exports in the industry conferences and visits it already conducts. Also, for relatively little cost, BXA could create a link on its main Internet web site specifically dedicated to deemed exports.

BXA generally concurred with Commerce OIG recommendations and has taken some steps to increase its outreach. For example, BXA recently added a deemed export web site off the main BXA web site.[9] The web site offers a list of questions and answers that Commerce OIG believes should be helpful to Federal agencies and U.S. industry. However, BXA stated that it had requested resources for an outreach program but was unsuccessful in having them included in the President's budget for FY 2001.

State's Outreach Program. The State OIG found that the DTC outreach program should be reviewed with an aim to heighten awareness of its audiences concerning defense trade licensing and compliance requirements related to foreign national access to militarily sensitive technologies. DTC is requesting

[8] "Improvements Are Needed to Meet the Export Licensing Requirements of the 21st Century," U.S. Department of Commerce Office of the Inspector General, IPE-11488, June 1999.

[9] http://www.bxa.doc.gov/DeemedExports/DeemedExportsFAQs.html

more staff and financial resources to increase its outreach efforts because officials believe that the DTC outreach program is making a difference in the defense industry's awareness of national security issues. As part of its outreach efforts, DTC participates in two annual defense trade licensing conferences for the Society for International Affairs and provides speakers for a number of other smaller defense industry group seminars. DTC maintains a web site[10] that provides information on the ITAR, related export licensing requirements, and various munitions export topics. Approximately every 6 weeks, DTC also conducts in-house seminars for about 40 individuals from the defense industry. Those 1- to 2-day training sessions focus on one or more topics, including regulatory issues, particular industrial sectors, and compliance issues. The State OIG recommended that DTC specifically include as one of its topics the licensing requirements for the transfer of information to foreign nationals. State management concurred with the recommendation.

[10] http://www.pmdtc.org

C. Federal Agencies' Policies and Procedures to Implement Deemed Export Controls

Commerce and Defense research facilities did not have export control policies and procedures to ensure that militarily critical technologies and technical information were only released to foreign nationals visiting research facilities in accordance with Federal export licensing requirements. Energy had policies; however, those policies needed further clarification.

Commerce's Implementing Policies and Procedures. The Commerce OIG found that NIST and NOAA did not have established export control procedures to ensure that technical information or know-how released to foreign nationals was in compliance with the EAR. Based on its findings, the Commerce OIG recommended that NIST and NOAA work with BXA to establish an export compliance program for deemed exports.

NIST generally concurred with the Commerce OIG recommendation. Specifically, NIST has met with BXA officials to begin establishing written policies and procedures on deemed exports, consistent with the Commerce OIG recommendations. In addition, although NIST has some training in place on deemed exports, NIST officials are contemplating improving that area as well.

NOAA concurred with the Commerce OIG recommendations, with the caveat that implementation of any export control policies and procedures are predicated upon clarifications to the regulations as recommended by the Commerce OIG, or the implementation of alternative solutions as suggested by BXA.

Defense's Implementing Policies and Procedures. The Defense OIG found that Defense research facilities did not have procedures for determining whether a deemed export license was required when a foreign national visited a Defense research facility. In addition, there was no guidance that would prescribe circumstances that would exclude Defense research facilities from requirements of the EAR and the ITAR. The Defense OIG recommended that Defense officials revise Defense directives to include export control requirements found in the EAR and the ITAR regarding foreign national visits and assignments to Defense organizations.

Energy's Implementing Policies and Procedures. The Energy OIG found that Energy's policy needed clarification regarding roles, responsibilities, and accountability for obtaining deemed export licenses. Energy Notice 142.1, "Unclassified Foreign Visits and Assignments by Foreign Nationals," July 14, 1999 (Energy Notice), lacked clarity regarding certain roles and responsibilities for foreign visits and assignments. For example, the Energy Notice did not specifically state that a host might be required to apply for an export license for a visit or assignment of a foreign national. The Energy OIG recommended that

Energy officials ensure that, among other things, the planned revision of the Energy Notice includes the principal roles and responsibilities for hosts of foreign national visitors and assignees. Energy management concurred with the recommendation.

D. Federal Agency Applications for Deemed Export Licenses

During FY 1999, 783 deemed export license applications were submitted to BXA for approval but only 5 applications were from Federal agencies (3 from Energy and 2 from NASA). According to DTC officials, few Federal research facilities and agencies apply for State munitions licenses, although it would appear that a number of activities in which those Federal entities are engaged constitute an "export" as defined by the ITAR and therefore subject to regulatory requirements. DTC was not able to identify any licenses approved for Federal research facilities and agencies. Commerce, Defense, and Energy OIG reviews found instances in which some Federal agencies may have required a deemed export license but had not applied for one.

Commerce. The Commerce OIG found, based on its limited sample of 16 foreign nationals working on projects at NIST, that 3 foreign nationals from countries of concern might have required a deemed export license. Specifically, the Commerce OIG shared the names, countries of origin, and project descriptions from its sample with BXA licensing officials for their review. Although BXA officials indicated that a more definitive answer would require more data from NIST, they indicated that three of the foreign nationals might have required a deemed export license.

The Commerce OIG met with the Director of NIST in January 2000 to discuss the issue. He was initially very receptive and further indicated that other NIST projects may require a deemed export license because those programs may not involve fundamental research. The Commerce OIG encouraged both BXA and NIST to follow up on the three cases identified by the Commerce OIG to determine whether a deemed export license should have been obtained and assist NIST in improving its export compliance program. An initial meeting between senior BXA export enforcement officials and the Director of NIST was held on February 23, 2000, to begin discussion of the issue.

In addition to the potential problem that NIST might not have obtained deemed export licenses for its visiting researchers, where appropriate the Commerce OIG learned that NIST agreements with its U.S. partner companies do not contain any language requiring its private partners to abide by U.S. export control laws, including obtaining appropriate licenses for their foreign national employees, if applicable, before working on NIST research projects. Although it is the companies' responsibility to apply for a license, if needed, the Commerce OIG believes that NIST is also responsible for the project and who has access to it (especially if the foreign nationals are using NIST facilities).

Although there appears to be some disagreement with how the Commerce OIG report reflects the potential problem at NIST regarding deemed export controls, NIST has agreed to work with BXA to ensure that its activities are compliant with the EAR.

With regard to the three foreign guest researchers Commerce OIG cited as possibly needing a deemed export license, NIST stated that those examples "did not violate the EAR." NIST based its statement on the fact that those individuals published the results of their research in question, thus falling under the fundamental research exemption in the EAR. However, based on subsequent conversations with BXA licensing officials and NIST officials, the Commerce OIG learned that BXA had not yet requested any additional information from NIST in order to make a licensing determination in this matter and NIST had not volunteered such data to BXA. Therefore, the Commerce OIG reiterated its recommendation that BXA and NIST work together to determine whether deemed export licenses should, in fact, have been obtained in those cases.

In addition, with regard to the recommendation that NIST require its private partners to obtain the appropriate licenses for their foreign national employees, if applicable, before permitting them to work on NIST projects, NIST initially responded that it did not agree with the recommendation. However, based on subsequent conversations with a senior NIST official in which the intent of the Commerce OIG recommendation was clarified, NIST agreed to add language to its future contracts whereby its partners would agree to abide by export control laws.

Defense. The Defense OIG found no evidence that Defense hosts had made a determination as to whether an export license was required or had certified that technical data released was exempt from ITAR licensing requirements. In addition, the Defense OIG found that export license applications were not submitted by hosts of foreign visitors, even though an export license may have been required. Also, the Defense OIG found that there was a close correlation between the research and development technologies that foreign nationals had access to and those identified in the Defense Security Service's ranking of technologies that were the subject of illicit foreign collection efforts. The Defense Security Service study, "1999 Technology Collection Trends in the U.S. Defense Industry," undated, reported that the four most often sought after technology categories by foreign entities (in descending order of number of occurrences) were lasers and sensors; information systems; aeronautics systems; and armaments and energetic materials. Those four technology categories were included in the Commerce Control List and the U.S. Munitions List.

The Defense OIG recommended that Defense officials coordinate with Commerce and State to establish guidance for applying deemed export licensing requirements and an export control program and procedures that will guide Defense research facilities in determining when to apply, and how to execute, export control requirements, with regard to foreign national visits and assignments.

Energy. The Energy OIG reviewed a small judgmental sample of the documentation[11] processed for proposed assignments of foreign nationals from

[11] Department of Energy Form IA-473, "Request for Foreign National Unclassified Visit or Assignment," or its equivalent.

countries of concern at four Energy laboratories. The Energy OIG found that, even though export license applications were not submitted, the assignments of several foreign nationals at one of the four laboratories might have required export licenses because of the information being accessed or the individuals' citizenship or affiliation. That same condition was reported in the Energy OIG May 1999 report. The Energy OIG recommended that the process for reviewing foreign visits and assignments at that specific site be modified to strengthen export control reviews. Energy management concurred with the recommendation.

National Aeronautics and Space Administration. The Commerce OIG reported that, in March 1999, the NASA OIG had completed a review of the agency's export activities related to controlled technologies. The NASA OIG, in its report, noted that NASA had not identified all export-controlled technologies related to its major programs and that the agency's oversight of training for personnel in the export control program needed improvement. The NASA OIG stated that, as a result, NASA might not have adequate control over export-controlled technologies to preclude unauthorized or unlicensed transfers. In February 2000, the NASA OIG informed the Commerce OIG that it was finishing a review of NASA oversight of its contractors with regard to export controls. In addition, the NASA OIG reported that it is conducting another review to evaluate what security controls NASA has in place over foreign nationals visiting its laboratories. Finally, the NASA OIG stated it intends to evaluate NASA compliance with deemed export regulations in the future.

Department of Transportation. According to the Commerce OIG, the General Accounting Office recently issued a report[12] stating that the Department of Transportation's Federal Aviation Administration did not conduct security checks on foreign nationals hired to fix year 2000 problems in sensitive computer systems used for air traffic control. Specifically, 15 mission-critical systems that were remediated had foreign national involvement, including Chinese, Pakistani, and Ukrainian nationals. However, not all of those foreign nationals received a proper background check.

In addition to the fact that security procedures were not followed, neither the Federal Aviation Administration nor its two contractors had applied for deemed export licenses for the foreign nationals. The Commerce OIG discussed with a BXA official responsible for reviewing those types of licenses whether the type of technology those foreign nationals had access to would have been controlled under the EAR. The BXA official indicated that more than likely the technology those foreign nationals were given access to was controllable under the EAR and, therefore, probably would have required a deemed export license. The Commerce OIG referred the matter to both BXA and the Department of Transportation OIG for review. In addition, the Commerce OIG recommended that BXA meet with Department of Transportation officials to ensure their understanding of and compliance with deemed export licensing requirements.

[12] "Computer Security: FAA [Federal Aviation Administration] Needs to Improve Controls Over Use of Foreign Nationals to Remediate and Review Software," GAO-AIMD-00-55, December 23, 1999.

E. Clarification of the Deemed Export Regulations

Commerce, Defense, and Energy[13] OIGs found that export control policies and regulations concerning deemed exports were ambiguous. The term "fundamental research" needed to be better defined so that Federal agencies are not given the opportunity to broadly interpret its meaning to avoid compliance with the intent of the regulations. Additionally, some of the exemptions listed in the regulations may adversely affect national security and therefore require further examination.

Clarification of Fundamental Research Definition. According to the EAR and the ITAR, fundamental research is defined as "basic and applied research in science and engineering where the resulting information is ordinarily published and shared broadly within the scientific community." The EAR continues that "such research can be distinguished from proprietary research and from industrial development, design, production, and product utilization, the results of which ordinarily are restricted for proprietary reasons or national security reasons."

Based on discussions with Commerce and Defense officials, the term "basic and applied research" appears overly subjective. For example, during its field work, the Commerce OIG found some senior officials at NIST who indicated that 80 percent of its research fell under that category, while another senior official at NIST indicated that the figure was 20 percent to 25 percent. As a result, the Commerce OIG questioned whether U.S. entities could misuse the exemption by broadly defining fundamental research and, as a result, not comply with deemed export controls. The Commerce OIG recommended that BXA clarify the term fundamental research to leave less room for interpretation by the scientific community as well as to avoid any confusion the term may cause. Because the EAR and the ITAR use identical wording regarding the definition of fundamental research, it would be reasonable to expect that Federal agencies having difficulty interpreting that provision of the EAR would also have the same problems interpreting the ITAR provision.

BXA generally concurred with the Commerce OIG recommendation to clarify the definition of "fundamental research" and, as an interim measure, has tried to clarify the term on the "Questions and Answers" page recently posted on its deemed exports web site.

Reexamination of Exemptions to Deemed Export Regulations. Commerce, Defense, and Energy OIGs had concerns about some of the exemptions from deemed export licensing requirements stated in the EAR. Specifically, items not

[13] Energy reported in its May 1999 report that export control policy and regulations concerning deemed exports were ambiguous. Energy also reported on the ambiguity in the EAR regarding fundamental research and whether an export license was required for research conducted at a Federally Funded Research and Development Center.

subject to the EAR include publicly available technology and software (except software controlled for encryption item reasons on the Commerce Control List) that:

- are already published or will be published,
- arise during or result from fundamental research,
- are educational, or
- are included in certain patent applications.[14]

In certain circumstances, those exemptions could negatively affect national security.

For example, research that is intended for publication, whether it is accepted by a scientific journal or not, is considered to be fundamental research. However, we believe that such a broad interpretation provides industry and Federal research facilities a loophole for not complying with the regulations. Essentially, any entity could argue that it intends to publish the research – even though it may take decades to do so.

In addition, research conducted by engineers or scientists working for a Federal agency or a Federally Funded Research and Development Center could be designated as fundamental research. For example, in its May 1999 report, the Energy OIG reported that most of Energy's laboratories were designated as Federally Funded Research and Development Centers. Therefore, one might conclude that export licenses are not required for research conducted by Energy laboratories. However, the Energy OIG questioned whether a blanket exemption for work at Federally Funded Research and Development Centers was intended by the regulation.

Furthermore, educational information is exempt from the EAR if it is released in an academic institution course or in associated teaching laboratories. For example, a course on design and manufacture of high-performance machine tools would not be subject to the EAR if taught as a university graduate course, even if some of the students were from countries for which an export license would normally be required. However, that same information, if taught by U.S. industry, would require an export license because industry does not qualify as an "academic institution." One could argue that if a foreign country wanted to gain as much knowledge about U.S. technology as it could, but wanted to avoid U.S. export controls, it could simply exploit that contradiction in policy by sending "professional" students to the United States.

The Commerce OIG recommended that BXA work with the National Security Council to determine the intent of the deemed export control policy and to ensure

[14] 15, Code of Federal Regulations, part 734.

that the implementing regulations are clear so as to lessen the threat of foreign nationals obtaining proscribed sensitive U.S. technology inappropriately.

BXA concurred with the Commerce OIG recommendation. On March 14, 2000, BXA formally requested that the National Security Council conduct a review of U.S. policy on deemed exports and chair an interagency meeting to define more clearly the goals and objectives of deemed export controls and their application to foreign nationals employed in the United States. BXA also stated that once it has obtained the necessary direction from the National Security Council, it will proceed to refine its regulations and terms accordingly.

F. Level of Compliance by U.S. Industry

Commerce and State OIGs attempted to determine whether U.S. industry was complying with the deemed export regulations and found that U.S. industry may not be complying with the export control requirements, but the exact level of compliance was unknown. Commerce determined that it received 783 deemed export license applications for approval during FY 1999, 778 from industry and 5 from Federal agencies. Because State did not systematically track foreign nationals listed on export licenses, the universe of deemed export license applications submitted to State by U.S. industry during FY 1999 could not be readily determined.

Compliance With the EAR. To determine whether U.S. high-technology industries were generally complying with the deemed export regulations, the Commerce OIG sought to obtain a reasonable estimate of what the level of license applications might be if there was widespread compliance. Because BXA officials were unable to provide such an estimate, the Commerce OIG looked for other possible measures to estimate compliance. The Commerce OIG compared the number of deemed export license applications that BXA received during FY 1999 (783) with the number of H-1B[15] visas issued during the same period (115,000). Out of the 115,000 H-1B visas issued for FY 1999, more than half of the visa holders came from countries of concern.[16] Specifically, India had 46 percent of the total and China had 10 percent, and the other countries that recorded the most H-1B visas (the top 10) were Canada (4 percent); the Philippines (3 percent); and Japan, Korea, Pakistan, Russia, Taiwan, and the United Kingdom (2 percent each). While clearly recognizing that not all 115,000 H-1B visa holders for FY 1999 would require a deemed export license, the Commerce OIG noted that the tremendous gap between the two figures raised questions about the extent of U.S. industry knowledge of and compliance with the deemed export regulations.

Compliance With the ITAR. DTC could not estimate how many Federal agencies or industries had applied or should have applied for deemed export licenses or what their level of noncompliance was; however, the State OIG found that the level of compliance by U.S. industry needed improvement.

State's Universe of Deemed Export License Applications. The State OIG found, in reviewing DTC policies and procedures for protecting the transfer of militarily sensitive technical data to foreign nationals from countries of concern, that DTC oversight of foreign nationals listed on export licenses was very limited. The State OIG found that the DTC tracking system did not separately account for foreign nationals on export licenses, relying heavily instead on self-policing by U.S. industry. The State OIG concluded that although State

[15] H-1B is a temporary visa category, which is valid for 3 years and can be extended for another 3, that includes specialty occupations such as college professors, doctors, engineers, and computer programmers. It is the latter occupation for which the greatest numbers of H-1B visas are generally requested.

[16] As reported by Immigration and Naturalization Service News Release, "INS H-1B Procedures as Fiscal Year 1999 Cap is Reached," June 11, 1999.

had started a new compliance program, overall compliance was not managed in such a way that DTC could determine whether its deemed export policies and procedures were adequate or if additional measures were needed. The State OIG recommended that DTC determine the effectiveness of its compliance program in reducing the risk of unauthorized disclosure of militarily sensitive information to foreign nationals.

Level of Compliance. A considerable amount of the information DTC receives about unauthorized foreign access to U.S. defense technology is the result of voluntary disclosures from U.S. industry. While such disclosures provide DTC with detailed information about unauthorized foreign access to U.S. defense technology, they also illustrate the risk of unauthorized defense technology disclosures to foreign nationals. The number of voluntary disclosures has been steadily increasing. The voluntary disclosure process outlined in the ITAR states:

> The Department strongly encourages the disclosure of information to the Office of Defense Trade Controls by persons, firms or any organization that believe they may have violated any export control provision of the Arms Export Control Act. Voluntary self-disclosure may be considered a mitigating factor in determining the administrative penalties, if any, the Department should impose. Failure to report such violation(s) may result in circumstances detrimental to U.S. national security and foreign policy interests.

In 1999, a total of 178 voluntary disclosures and 64 referrals[17] were made to DTC. According to DTC, 61 voluntary disclosures and 7 referrals (28 percent of the combined total) involved an unauthorized transfer of militarily sensitive technical data to foreign nationals. The State OIG determined that among the disclosures and referrals involving foreign nationals, 14 voluntary disclosures involved foreign nationals from countries of concern. Voluntary disclosures indicate that there are releases of technical data of which DTC was unaware.

[17] A senior DTC official defined referrals as any disclosure that comes from outside of the U.S. industry involved, including other companies, other Government agencies such as the U.S. Customs Service, and DTC licensing officials. DTC treats referrals like voluntary disclosures; however, there are no written policies or procedures to that effect.

Appendix A. Review Process

Scope

The review focused on implementation of the Export Administration Act, the Arms Export Control Act, and associated regulations, policies, procedures, and practices that were in effect related to deemed export licensing at the participating Federal agencies at the time of this review. In addition, the review focused on other applicable laws, executive orders, regulations, and departmental guidance regarding foreign visits and assignments and deemed export controls. To determine the adequacy of controls to protect militarily sensitive technologies and technical information from unlicensed export, the OIG review teams contacted responsible personnel in their respective agencies and in other Federal agencies and governmental organizations, as appropriate, who were involved in the export licensing process or who were involved in hosting foreign nationals. Each review team assessed visit or foreign worker authorizations or requests to determine whether foreign nationals might have accessed any militarily critical technology or technical information for which an export license would have been required. The participating review teams were from Commerce, Defense, Energy, and State OIGs.

Methodology

The OIG teams as a minimum included in their reviews countries and entities of concern as defined by law, and in some cases expanded their review to include other countries. The reviews were conducted from October 1999 through February 2000. The review teams visited Federal laboratories and agencies to determine management controls and the adequacy of the controls to protect militarily sensitive information.

Commerce Methodology. To determine the adequacy of deemed export regulations, including BXA implementation of those regulations, as well as compliance with the regulations by industry and Federal agencies, the Commerce OIG followed up on its recommendations concerning deemed exports from its June 1999 report on export licensing. The Commerce OIG interviewed various BXA officials about deemed export regulations, including senior managers, attorneys, licensing officials, and enforcement agents. In addition, the Commerce OIG spoke with officials at Commerce's NIST and NOAA; Defense; Energy; State; and NASA.

The Commerce OIG reviewed summaries of all 783 license applications submitted to BXA during FY 1999 to determine how many applications were approved, denied, returned without action, or pending; how many dealt with foreign nationals from countries and entities of concern; what type of controlled technologies countries and entities of concern had access to through foreign

nationals for whom export license applications had been submitted; and how many Federal agencies had applied for a deemed export license. Also, the Commerce OIG reviewed a sample of 580 names from the "Guest Researcher" list of foreign visitors to NIST during the period of January 1 through November 5, 1999. The limited review at NIST, as well as the brief survey at NOAA, was conducted to determine the need to obtain deemed export licenses.

Defense Methodology. To determine the adequacy of Defense policies and procedures to prevent the transfer of technologies and technical information with potential military application to countries and entities of concern, the Defense OIG visited six Defense research facilities. At the six Defense research facilities visited, the Defense OIG reviewed foreign visit authorization listings. The Defense OIG judgmentally selected foreign visits for review from the 11,544 total foreign visits approved during FY 1998 and FY 1999. The Defense OIG reviewed the appropriate case files and related international agreements, technology disclosure authority letters, and security classification guides to identify established controlling authorities for disclosure of militarily sensitive technologies and technical information to foreign national visitors at Defense research facilities and program offices visited. In addition, the Defense OIG interviewed those managers responsible for approving visits and for overseeing foreign national visits. It also reviewed available documentation for technologies and technical information provided to foreign nationals during the visits.

Energy Methodology. To determine the adequacy of Energy policies and guidance to prevent the transfer of technologies and technical information with potential military application to countries and entities of concern, the Energy OIG conducted a review at Energy headquarters and four Energy laboratories. The Energy OIG reviewed applicable laws, Executive orders, Energy regulations, and departmental guidance regarding foreign visits and assignments and deemed exports. The Energy OIG interviewed headquarters and Operations Office personnel, Energy laboratory contractor officials, and the hosts of recent foreign national visitors. The Energy OIG judgmentally selected applications of foreign nationals from countries on the Energy "Sensitive Countries List" that had requested assignments to the selected Energy laboratories. The Energy OIG analyzed the selected applications to determine whether a deemed export license might have been required because of the information being accessed or because of the individual's citizenship or country affiliation.

State Methodology. To determine the adequacy of State policies and procedures to protect against the unauthorized release of militarily sensitive information to foreign nationals from countries and entities of concern, the State OIG visited DTC. The State OIG reviewed applicable sections of the ITAR and DTC policies and procedures to identify established guidance for protecting against the transfer of militarily sensitive data to foreign nationals from countries and entities of concern. The State OIG examined the Defense Trade Application System database to identify the universe of active export licenses issued by DTC to Federal laboratories and agencies for foreign national visitors.

The State OIG assessed the adequacy of Defense Trade Application System capabilities to provide export license oversight. The State OIG assessed the mechanisms implemented to minimize the risk of unauthorized disclosure of militarily sensitive technical information to foreign nationals. In addition, the State OIG visited a Defense research facility. State OIG did not visit any munitions licensees to determine their level of awareness of the deemed export licensing requirement.